

# **Norman Utilities Authority**

## **2060 Strategic Water Supply Plan**



**Ad Hoc Committee Meeting #5**  
**March 4, 2013**

# Agenda

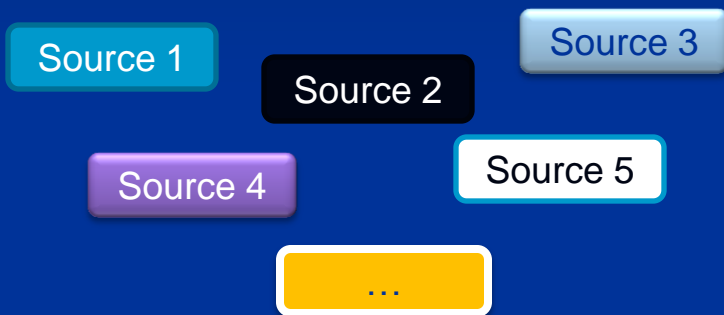
- Introduction and Goals for Meeting
- Project Update: Status and activities since January 10 Ad Hoc meeting
- Quick Review of Supply Options & Criteria
- Portfolio Evaluations
- Upcoming Public Meetings
- Action Items and Next Steps

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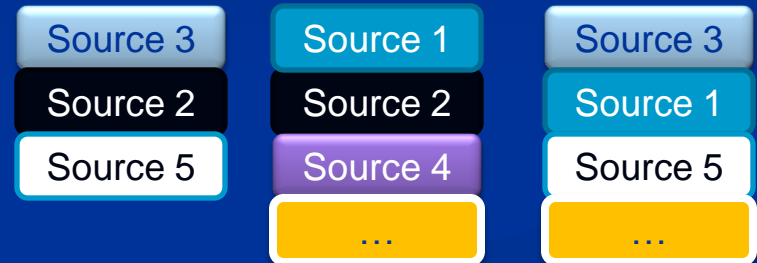
# Water Supply Planning Terminology & Process

## Source Options (Phase 1)



Short-List of Viable  
Source Options

## Supply Portfolios (Phase 2)



Detailed Evaluation  
Process

2-3 Preferred  
Supply Portfolios



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# Supply Sources Used for Portfolio Development

## ■ Existing:

- Lake Thunderbird
- Garber-Wellington Aquifer Wells
- Conservation
- OKC (wholesale)

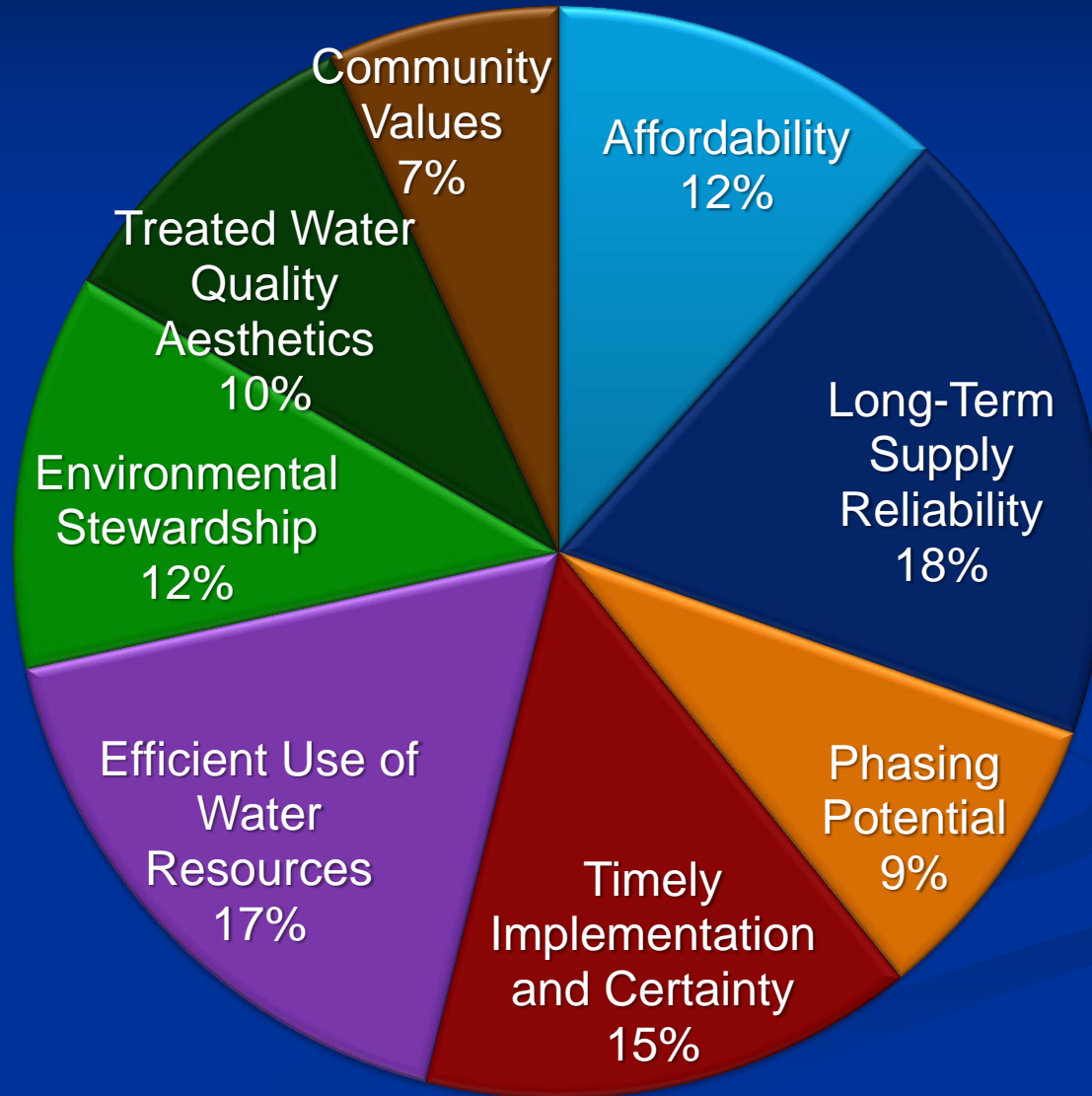
## ■ New Local:

- Direct non-potable reuse
- Additional conservation
- Lake Thunderbird augmentation (indirect potable reuse)

## ■ Regional:

- Bulk treated water from OKC (owner)
- Bulk raw water from OKC (owner)
- New out of basin reservoir (Parker or Scissortail)
- Kaw Lake

# Criteria and Their Relative Importance or “Weight” in Comparing Portfolios



# Portfolio Scoring Process

1. Portfolio is scored against first Objective (“Raw Score” without weighting):  
*Can be in \$, acre-feet, 1-5 score...*
2. Raw Score x Objective Weighting = Partial Portfolio Score
3. Process repeated for remaining Objectives to get Total Portfolio Score

*Steps 1-3 repeated for remaining Portfolios*



# Portfolio Scoring Process

Raw score  
(Reliability)

$$\times \text{[Pie Chart with 1/4 shaded blue]} = \text{Partial Portfolio Score}$$

Raw score  
(Phasing)

$$\times \text{[Pie Chart with 1/8 shaded orange]} = \text{Partial Portfolio Score}$$

Raw score  
(Timely)

$$\times \text{[Pie Chart with 1/8 shaded red]} = \text{Partial Portfolio Score}$$

... repeat for remaining criteria  
... repeat for remaining portfolios

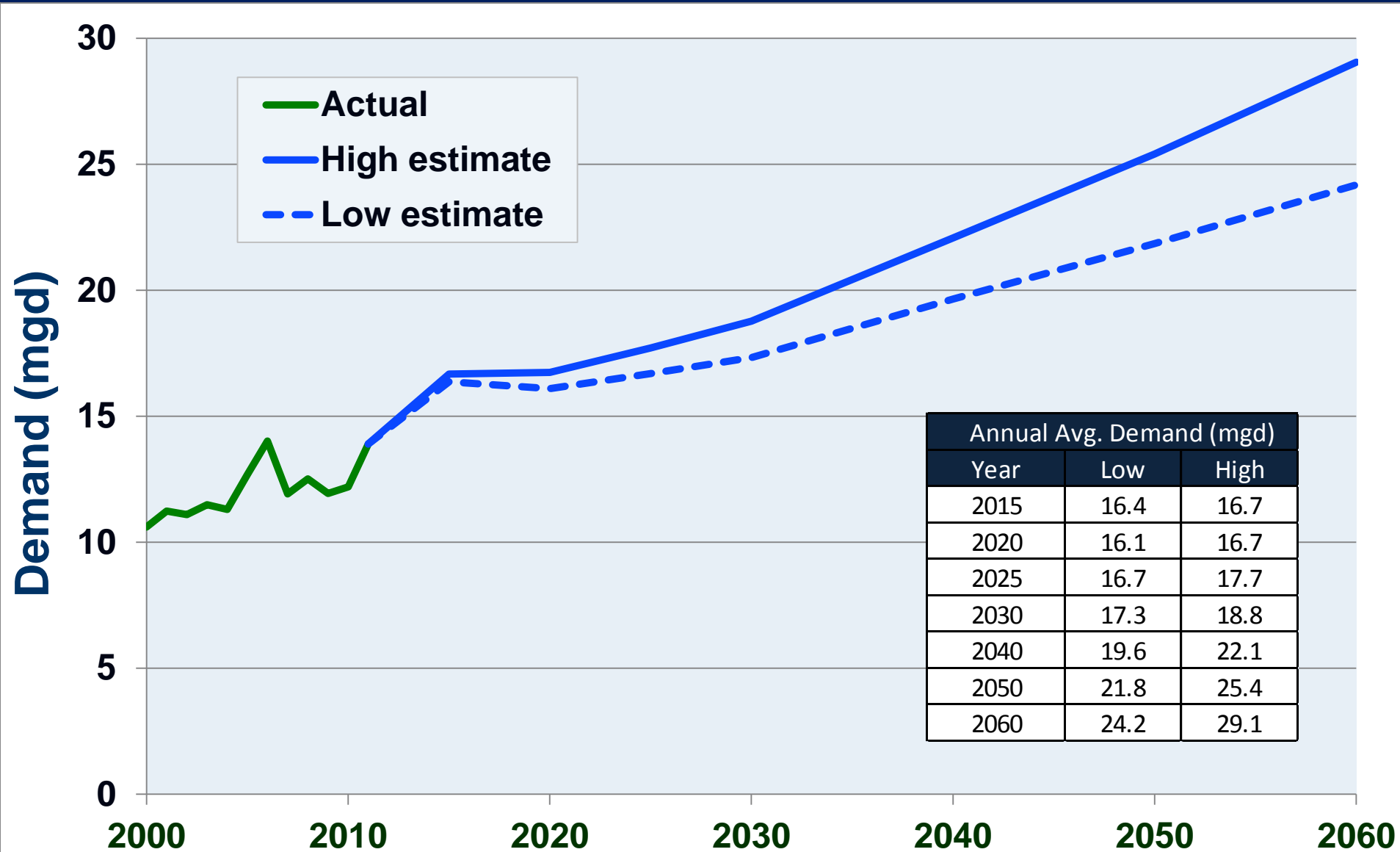


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# Service Area Demand Projections

*Annual average, including reserve and passive conservation savings*

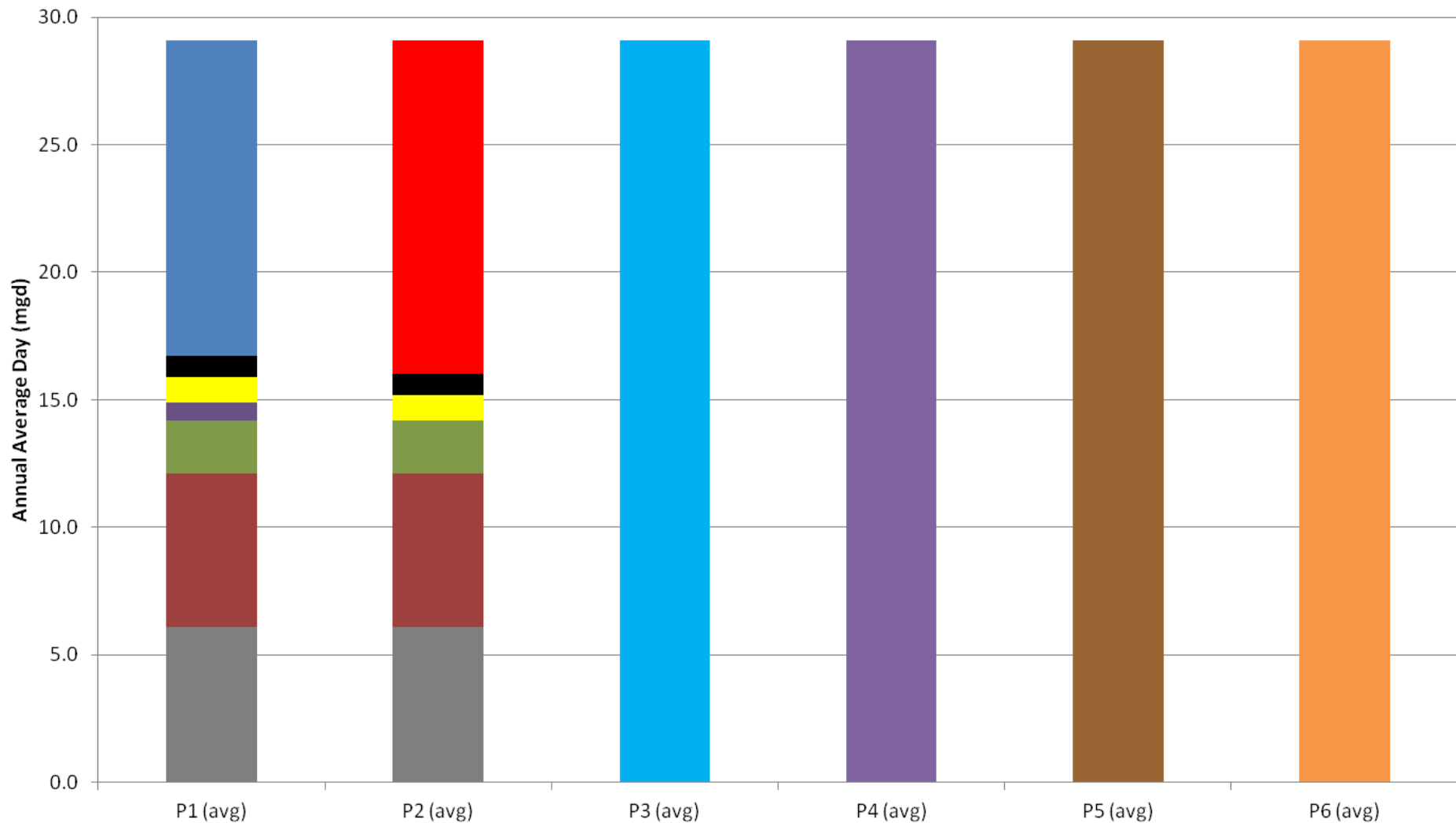


# Initial Portfolios

- Portfolio 1: Maximize Local Source Use
  - Lake Thunderbird at baseline yield
  - Existing wells treated for chromium-6 & arsenic
  - Additional conservation + non-potable reuse
  - New GW wells to meet remaining deficit through ~2020 (max # wells = twice current)
  - Thunderbird augmentation for deficit post-2020
- Portfolio 2: Low Capital Cost
  - Same as above but no new wells, no Lake TB augmentation, fill gap with OKC Treated (\$/kgal)

# Additional Portfolios

- Compare “bookend portfolios” for New Regional options
  - Portfolio 3: 100% from OKC Treated
  - Portfolio 4: 100% from OKC Raw
  - Portfolio 5: 100% from New Out of Basin Resv.
  - Portfolio 6: 100% from Kaw Reservoir
- Review Results → Create Hybrid Portfolios
  - Combination of strongest Regional sources and strongest Local sources



■ Lake Thunderbird

■ Active Garber Wellington Wells (with treatment)

■ Inactive Garber Wellington Wells (with treatment)

■ New Garber Wellington Wells (with treatment)

■ Additional Conservation

■ Direct Non-potable Reuse

■ Lake Thunderbird Augmentation (IPR)

■ Treated Water from Oklahoma City (wholesale)

■ Treated Water from Oklahoma City (owner)

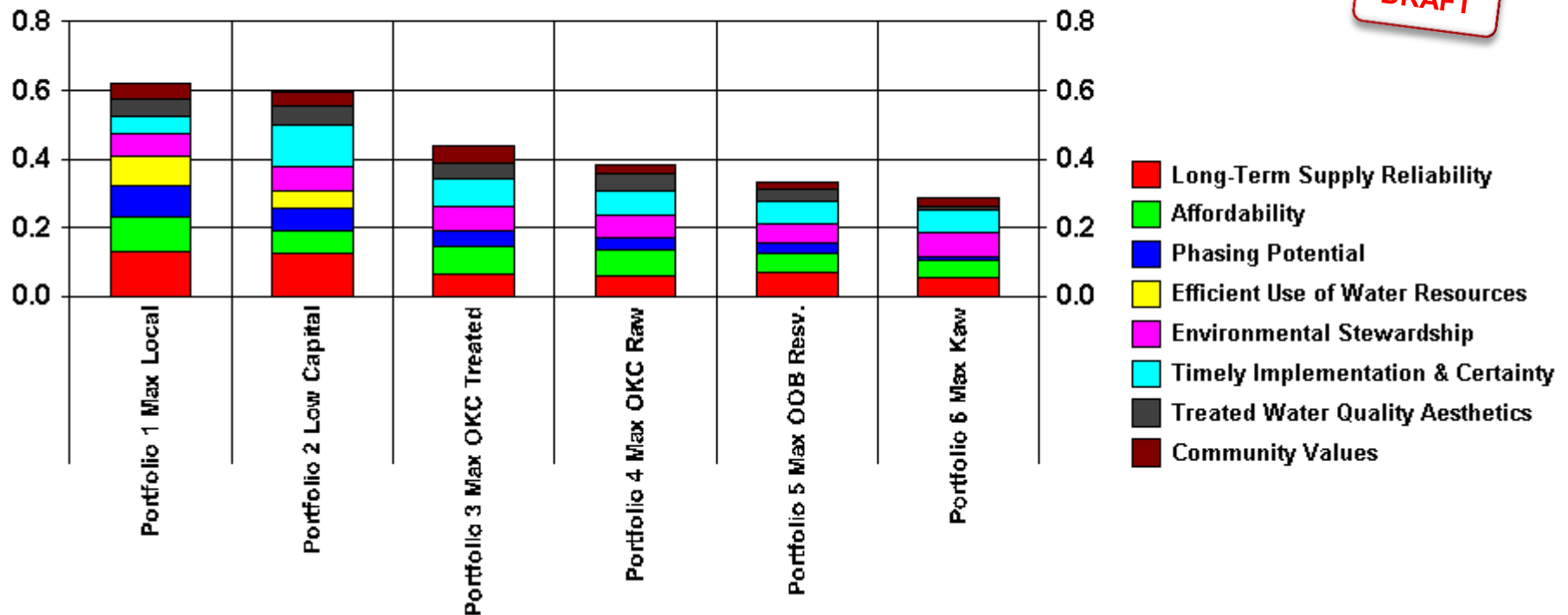
■ New Out of Basin Reservoir (Parker or Scissortail)

■ Raw Water from Oklahoma City (owner)

■ Kaw Lake

# Initial Portfolios: Weighted Scoring

Contributions to Preferred Portfolio from Level: Objectives



\$260M

\$21 M/yr

\$140 M

\$53 M/yr

\$410 M

\$24 M/yr

\$440 M

\$24 M/yr

\$620 M

\$26 M/yr

\$620 M

\$26 M/yr

Capital (2012\$)

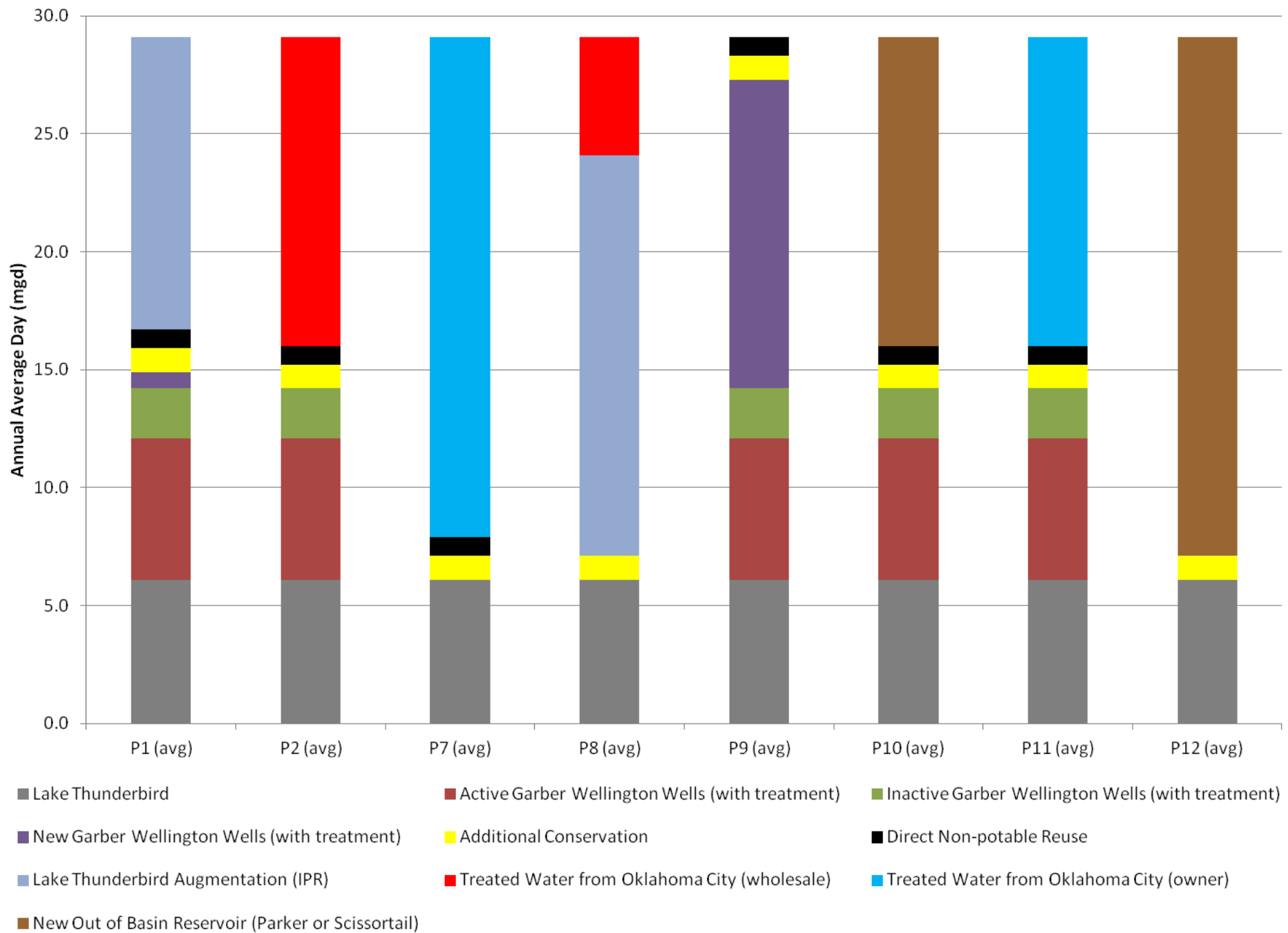
2060 O&M (2012\$/yr)

# Hybrid Portfolios

(All have Lake TB baseline & Additional Conservation)

- **Portfolio 7**: Non-potable direct reuse, OKC (owner) – no groundwater use
- **Portfolio 8**: Indirect potable reuse (Lake Thunderbird augmentation), OKC (wholesale) – no groundwater use
- **Portfolio 9**: Maximize groundwater use, Non-potable direct reuse
- **Portfolio 10**: Existing groundwater use (plus treatment), Non-potable direct reuse, New out-of-basin reservoir (Parker)
- **Portfolio 11**: Existing groundwater use, Non-potable direct reuse, OKC (owner) – similar to P2 but OKC (owner) instead of OKC (wholesale)
- **Portfolio 12**: New out-of-basin reservoir (Scissortail)

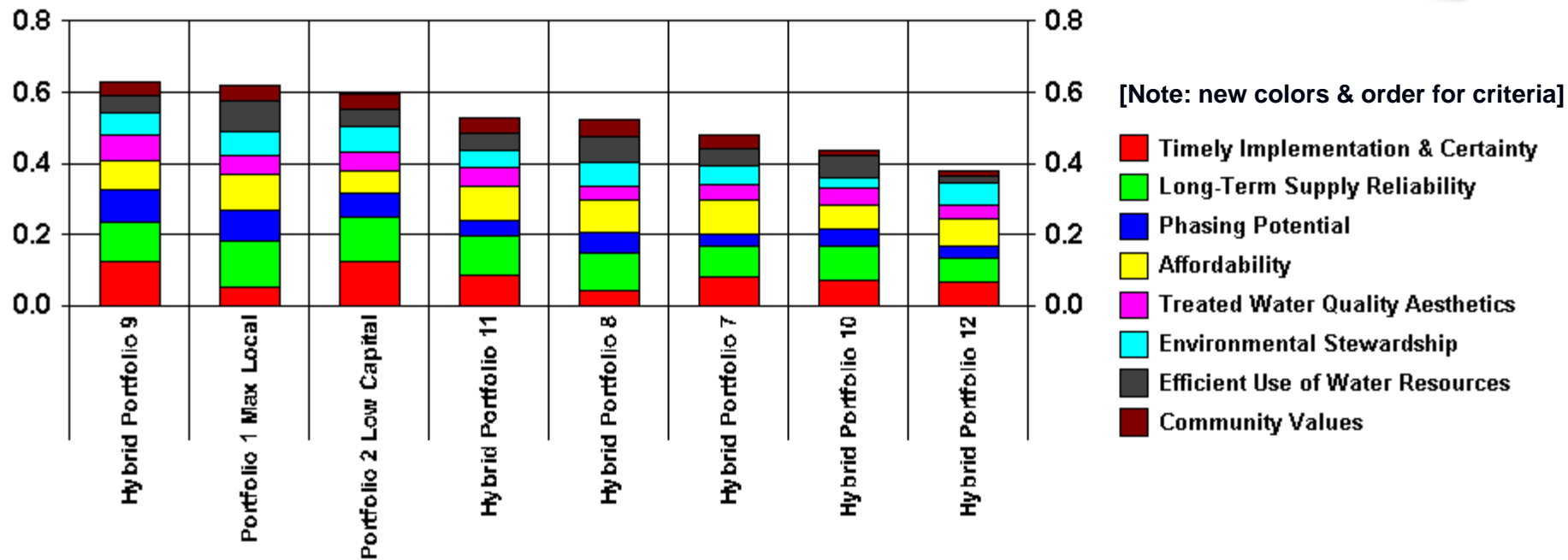




# Hybrid Portfolios: Weighted Scoring

Contributions to Preferred Portfolio from Level: Objectives

**DRAFT**



\$360 M

\$260 M

\$140 M

\$300 M

\$180 M

\$320 M

\$490 M

\$440 M

\$26 M/yr

\$21 M/yr

\$53 M/yr

\$22 M/yr

\$34 M/yr

\$22 M/yr

\$25 M/yr

\$22 M/yr

Capital (2012\$)

2060 O&M (2012\$/yr)

# **Hybrid Portfolios:**

**Feedback?**

**Different portfolios  
we should evaluate?**

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  - Public Meeting #3:  
Portfolio evaluation – What/how should we present?
  - Public Meeting #4:  
After evaluation of revised water supply portfolios
- Action Items and Next Steps

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